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UB_CLEAN V2.1.3.4 and UB_REPLACE V2.1.3.4

Segment Load Instructions

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1.1 Segment Load

The UB_REPLACE and UB_CLEAN segments provide for the installation of the full UB 2.1.3.4 system (SysAdm, SecAdm, GCCS COE, JMTK, UBApps, JMCISApps), while removing all previous UB segments and patches, and preserving critical UB configuration data. It may be loaded on any GCCS 2.1 system running UB 2.1.3 and above, including the GCCS-D "Bosnia" Variant (UB 2.1.3.3).

This document describes:

- The preparation information to be read before loading the segment tape
- The segment load instructions
- Information on the notable impacts of this segment load on your existing GCCS system.

For a detailed description of changes between the previous version of GCCS and this version, refer to the UB 2.1.3.4 Version Description Document included with this segment. For details on specific JMCIS functions, refer to your UB 2.1.3.4 User's Guide.

It is important to read this entire document before proceeding with the segment load.

Important information on the impact this segment may have on your system is included in the information below. Failure to read this information thoroughly may result in the loss of data and improper loading of the segment tape.

Segment Pre-loading information:

1. Reboot each system before loading the UB_CLEAN and UB_REPLACE segments. This will help ensure that all JMCIS processes are dead prior to running the segment. If your site has manually modified the system to run JMCIS core processes in the background at boot-time, then these running JMCIS processes must be killed prior to installing the segment. As a double-check, you may verify your system's readiness by using the Disk Manager option from the SysAdmin menu to unmount the "/h/Nauticus/data/mnt" partition, if it is mounted.

2. Existing JMCIS user menus are modified (not replaced) by this segment. Several JMCIS functions are added to the existing menu structure, but if any of these (e.g., Slides, Link-11 items) have already been added manually at your site, the segment may be unable to prevent duplicate menu items from appearing.

3. The following data directories will survive the loading of the UB_CLEAN and UB_REPLACE segments, and can be expected to exist on the new UB 2.1.3.4 system after rebooting:

    - Config (general JMCIS MMI defaults)
    - Overlays
    - Optionals (files added by some older non-UB segments)
    - Pimtracks
    - ScreenKilos

- FourWhiskeys
- Sites
- local/System/Network (host files designating TDBM Master Server, other clients, etc)
- Tracks/Tables (e.g. FLAG-THREAT table, AEN table, ELNOT VERSIONS)
- mnt/System/Network (JMCIS global system network data)
- Messages/Headers (Saved Message Headers)
- Messages/Channels (Comms=>Communications channels and configurations)
- Messages/Host-Table (DDN Host Table)
- Messages/MprTable (internal system list of message types decoded)
- Messages/Broadcasts/BcstList (internal system list of broadcasts configured)

4. This segment does an implicit CLEAN DATA FILES of all perishable data (Tracks, Messages, Map Toggles). To avoid the loss of data during the clean procedure, you should ensure that you have archived a copy of your current track database or have made arrangements to transmit the database from another, unaffected system, before commencing this segment load. To archive the database, use the Track Summaries pop-up menu, and the MISC=>Archive/Restore function with the "DISK" option.

5. If you wish to install this segment via the Installation Server, the /home2 partition on the system you are using as an Installation Server must be exported. Follow the steps below on the Installation Server machine:

   a. View the /etc/dfs/dfstab file. Ensure the following line is included in the file (if not listed, it must be added):

      share -F nfs -o anon=0 /home2

   b. Save the changes to the /etc/dfs/dfstab file.

   c. From an xterm command line, enter the following:

      exportfs -a

6. NOTICE: The color of SysAdmin windows will revert to default light blue after UB_CLEAN is installed, due to the removal of app-defaults. This is an expected result, and the correct colors will be restored after UB_REPLACE is installed and the system is rebooted.

7. Ensure that you *do not* log out after loading UB_CLEAN, without first loading UB_REPLACE. Because UB_CLEAN removes several login files which are subsequently replaced during UB_REPLACE, these two must be loaded in the same login session.

To load the segments from tape or from an Installation Server:

1. If loading from tape, insert the UB_CLEAN/REPLACE segment tape into a tape drive. If loading from Installation Server, ensure that the Server has been properly loaded with both segments.

2. Log in to the client machine as **sysadmin** and double-click the Installer icon. The Segment Installer window appears.

Figure 1.1-1 SEGMENT INSTALLER Window

3. In the Segment Installer window, click SELECT MEDIA in the SOURCE box. The SELECT MEDIA window appears.

Figure 1.1-2 SELECT MEDIA Window

4. If loading from tape, complete the following steps. If loading from the Installation Server, proceed to Step 5.

    a. In the SELECT MEDIA window, click LOCAL (if the tape is in the machine you are upgrading) or REMOTE (if the tape is in another machine). If you select REMOTE, a NAME field appears just below REMOTE. Click the button next to the NAME field to display a list of hosts available on the local network, and select the hostname of the machine where the tape drive is located.

    b. In the DEVICE box, select the media type (e.g., DAT or OTHER) for the tape. If you select OTHER, you must enter the device name of the tape medium you are using (e.g. / dev/rmt/0mn). Proceed to Step 6.

5. If loading from the Installation Server, complete the following steps.

    a. In the SELECT MEDIA window, click LOCAL.

    b. In the DEVICE box, select the media type (e.g., DAT or OTHER) for the tape. If you select OTHER, you must enter the device name of the tape medium you are using (e.g. / dev/rmt/0mn).

6. Click OK to return to the SEGMENT INSTALLER window.

7. Click Read TOC. The items that appear in the TABLE OF CONTENTS portion of the Segment Installer window are the names of software segments contained on the tape or Installation Server.

8. From the list, select UB_CLEAN from the TABLE OF CONTENTS list.

9. Click INSTALL. A window appears, displaying an hourglass, indicating that the system is busy installing the selected segment(s). The segment requires a few minutes to load and execute.

10. At this point, you may receive one (or possibly two) warning windows, containing one of the following statements / questions:

    No files listed to save. This will force this load to be destructive.
    Do you wish to continue with removing executables?

    UB_REPLACE backup already exists. Its contents will be overwritten if we continue.
    Do you wish to continue, thereby destroying UB_REPLACE.backup?

    You should always choose NO when answering these questions. If you answer YES to either question, this segment load may destroy the existing GCCS architecture or any backed up data files created by the system.

    The first error listed above indicates a problem reading the segment from the tape. Check the tape and or drive to ensure it is functioning properly, and try loading UB_CLEAN again, starting with Step 8 of this procedure.

    The second error listed above indicates that the backup file that is created by UB_CLEAN during its install already exists. This may be because you have already selected and run UB_CLEAN. Double-check the selection in the Segment Installer window to ensure you have not accidentally reselected UB_CLEAN. An asterisk (*) beside the name of the segment in the Table of Contents listing in the Segment Installer indicates that the segment has been loaded.

11. When the segment installation is complete, a warning window appears, stating Selected Segment(s) Installed Successfully.

12. Click OK in the warning window.

13. Highlight UB_REPLACE from the TABLE OF CONTENTS list.

14. Click INSTALL. The segment installs. This segment may take 30-45 minutes to load.

15. At this point, you may receive a warning window containing the following statement / question:

    UB_REPLACE.backup directory does not exist. This patch will overwrite data without preserving any previous changes.
    Do you wish to overwrite the segments and the data?

    You should always choose NO when answering this question. If you answer YES, this segment load may destroy the existing GCCS architecture.

The error listed above indicates that the backup file created by UB_CLEAN during its install does not exist. This may be because you have not already selected and installed UB_CLEAN before attempting to install UB_REPLACE. Double-check the selection in the Segment Installer window to ensure you have not accidentally selected UB_REPLACE before selecting and installing UB_CLEAN. An asterisk (*) beside the name of the segment in the Table of Contents listing in the Segment Installer indicates that the segment has been loaded.

16. When the segment installation is complete, a warning window appears, stating Selected Segment(s) Installed Successfully.

17. At this point in the load, another warning window appears, stating that you must reboot your machine after completing the installation.

18. Click OK in both of the warning windows.

19. In the Segment Installer window, click EXIT.

20. Reboot the machine, using the Reboot option on the Hardware menu.

21. If this system is a Tdbm Client, log in to the machine as **sysadmin** and select Disk Manager from the Hardware menu. Using Disk Manager, mount /h/Nauticus/data/mnt from the TDBM Master Server machine as follows:

    a. In the Disk Manager window, click MOUNT NEW. The MOUNT NEW window appears.

    b. Click the FILE SYSTEM: field to activate it, and enter <hostname>:/h/Nauticus/data/mnt (where <hostname> is the name of the TDBM Server). Press [Return].

    c. Click the MOUNT POINT: field to activate it, and enter /h/Nauticus/data/mnt. Press [Return].

    d. Click MOUNT. A warning window appears, asking you to verify that you want to permanently mount the file system.

    e. Click YES in the warning window to permanently mount the file system.

    f. In the Disk Manager window, click EXIT. The Disk Manager window closes.

    For more detailed instructions on using Disk Manager, see Section 1.3, later in this document.

To load the segments onto the Installation Server:

NOTE: The Installation Server function allows segments to be stored centrally, so that they may be loaded across the network. The segments must first be copied from tape to the installation server (in raw format), and then they will be accessible to client machines from

the standard Installer. The loading of a segment to the Installation Server does not constitute an installation of that segment on the machine being used as a Server. The segment must be installed on that machine as on any other, from the raw segment stored on its own disk.

1. Insert the UB_CLEAN/REPLACE segment tape into a tape drive

2. Log in to the Installation Server machine as **sysadmin** and select Installation Server from the Software menu. The SEGMENT INSTALLATION SERVER window appears.

3. In the SEGMENT INSTALLATION SERVER window, click SELECT MEDIA in the SOURCE box. The SELECT MEDIA window appears.

4. In the SELECT MEDIA window, click LOCAL (if the tape is in the machine you are upgrading) or REMOTE (if the tape is in another machine). If you select REMOTE, a NAME field appears just below REMOTE. Click the button next to the Name field to display a list of hosts available on the local network, and select the hostname of the machine where the tape drive is located.

5. In the DEVICE box, select the media type (e.g., DAT or OTHER). If you select OTHER, you must enter the device name of the tape medium you are using (e.g., / dev/rmt/0mn).

6. Click OK to return to the SEGMENT INSTALLATION SERVER window.

7. Click Read TOC. The items that appear in the TABLE OF CONTENTS portion of the SEGMENT INSTALLATION SERVER window are the names of software segments contained on the tape.

8. From the list, select UB_CLEAN from the TABLE OF CONTENTS list.

9. Click LOAD. A window appears, displaying an hourglass, indicating that the system is busy loading the selected segment(s) to hard disk. NOTE: This does NOT constitute an installation of the segment on this machine, only a transfer of raw data from tape to disk.

10. When the segment load is complete, a warning window appears, stating Selected Segment(s) Loaded Successfully.

11. Click OK in the warning window.

12. Highlight UB_REPLACE from the TABLE OF CONTENTS list.

13. Click LOAD. The segment loads.

14. When the segment load is complete, a warning window appears, stating Selected Segment(s) Loaded Successfully.

15. In the Segment Installer window, click EXIT.

16. The UB_CLEAN and UB_REPLACE segments are now available for loading from the NETWORK device on any system that shares the same "/h/data/global" filesystem with the Installation Server.

Segment Post-loading information:

1. After the UB_REPLACE segment is installed and your machine is rebooted, your system will be loaded with UB 2.1.3.4. From the Installer, you will notice all previous UB patches have been removed, and the standard UB segments upgraded to UB 2.1.3.4. The UB_REPLACE segment that remains after the load is now just an empty shell and may be deinstalled or not, as the administrator desires. Note that deinstalling the UB_REPLACE segment does not reverse the UB 2.1.3.4 load, but simply removes the leftover empty shell segment, so that it is no longer visible to the Installer.

2. The Map Host concept is new in UB 2.1.3.4. It allows a machine with spare hard disk space to serve digital maps across the network. Both local maps and maps on the Map Host are available to the local JMCIS. If your site has modified the system manually to NFS mount /home2/mapdata, this will not conflict with the Map Host concept, but it will disable the capability to display local digital maps. By default, the new Map Host is set to the same machine as the TDBM Master Server host. The Map Host setting may be modified using Set Hosts from the System Administration Network menu. For detailed instructions on using Set Hosts, see Section 1.2.

3. The following USERS/*/Scripts will be moved to *.pre2134 and new ones placed in the users directory, thereby saving any user changes in the .orig file:

   - .cshrc
   - .Xdefaults
   - .mwmrc
   - .login
   - .c_p
   - .xsession

4. On machines where /h/USERS is not mounted from another location, the users listed under this directory will have 6 script files changed. These files are first copied to <filename>.pre2134 and then the new file is copied into their /Script directory. Diffs are then performed between the new file and the saved .pre2134 copy. These diffs are captured in /h/USERS/sysadmin/Scripts/UB_REPLACE.user.diff and have ********** dividers between users and ========== dividers between files. Each file being diffed has a line in the file, indicating that the following diff pertains to the specified file.

   Diffs to be expected are:

   - .cshrc - umask changed from 2 to 0 to prevent JMCIS user permissions conflicts

   - .Xdefaults - keyBindings changes from GCCSP5, xterm additions, and Mwm additions for an EM fix to prevent window closing from the Motif window.

- .mwmrc - removed UNIX® xterm capability, Motif™ support for GCCSP5 and EM .Xdefaults changes.

The following have no diffs between GCCS 2.1.3.1 and 2.1.3.4

- .c_p
- .login
- .xsession

1.2 Set Hosts

In order for a local workstation running GCCS software to be fully operational within the LAN, a list of hosts in the LAN must be set on the local machine. The Set Hosts window provides a Graphic User Interface (GUI) that allows the user to set the host names in the resource files that are required to run GCCS software.

To view the current Sets Hosts window, select Set Hosts from the Network menu. The Set Hosts window appears.

Figure 1.2-1 Set Hosts Window

Two types of hosts may be set using the Set Hosts window: Full hosts and Printer hosts. Full hosts are other hosts on the network, including the administrative, broadcast, and pcm hosts. Printer hosts are print servers for the various printers that may be enabled from the workstation. A Full host may also be used as a printer server.

The Set Hosts window initially displays a generic listing of 30 potential full hosts and 5 printer hosts in a Hosts box on one side of the window (defaults to jots1 through jots30 and milan 1 through milan 5). The other side of the Set Hosts window displays the server hosts (broadcast, pcm, etc.) related to the workstation.

NOTE: On GCCS networks, the 5 printer host fields should always be left empty.

To set the hosts:

1. In the Hosts box on the left side of the window, click the toggle box beside the host entry you wish to change. Note that when the toggle box is activated (yellow), the host is designated as a Full host; and when the toggle box is deactivated (empty), it is designated as a Printer host (and the label name changes from Full Host to Printer Host).

2. Click the name field next to the appropriate toggle box. The field will become active and is now editable. Enter the name of the host.

NOTE: The local host ("this" machine's hostname) should be entered as Full Host #1. Any other hosts on the local network should be entered as subsequent hosts (Full Host #2 through Full Host # X).

3. Click OK to save the changes you have made to the Hosts box.

NOTE: Whenever OK is clicked, the Set Hosts window saves the changes made up to this point and closes. In order to further edit the window, you must restart the window from the Network menu. If you choose, you may make multiple changes to the window per session without clicking OK.

To delete a host entry:

1. Select the host to be deleted and clear the corresponding host name field.

2. Click OK. The Set Hosts window closes, saving the changes. Because the system will not maintain an "empty" host entry, when you reopen the Set Hosts window, the entry that was left empty will be eliminated from the system.

The Hosts box displays the list of hosts that are available on the LAN. A total of 30 Full host entries are available, but more may be added, if required.

To add a host entry:

1. In the Hosts box, click NEW. A new entry appears at the bottom of the scroll box.

2. Set the new host as described previously in this section.

NOTE: When the 31st (or later) Full host is added to the list displayed in the Hosts box and OK is clicked, a warning window appears, informing you that the addition of the host may cause problems. If your machine is capable of supporting additional hosts, then clicking SAVE saves the host, and clicking FIX IT allows you to go back and delete unneeded hosts.

When all necessary hosts have been defined in the Hosts box, you must define which hosts serve which specific function on the LAN.

To assign specific host roles:

1. In the GCCS environment, both the TDBM server and TDBM clients should have the TDBM server hostname in each of the following:

admin	pcm
bcst	prt
com	qs
icm	tdb
mps	wdbm
ocm	

2. In the map field, enter the map server hostname.

3. Click OK to save the changes you have made to the Hosts box.

1.3 Disk Manager

The Disk Manager option provides information on the available mounted and unmounted devices and file systems on a workstation, such as sd0a, sd1h, and /home/Nauticus/data/mnt.

- A *mounted* device can be accessed for read and write operations.

- An *unmounted* device has disk space that is potentially available for such operations. An unmounted device must be mounted to a particular directory before its available space can be used.

To view this data, select the Disk Manager option from the Hardware menu. The Disk Manager window appears.

Figure 1.3-1 Disk Manager Window

To mount a device:

NOTE: Problems may arise if two devices are mounted to the same directory. To prevent this, ensure that no duplicate references to the same directory exist in the MOUNTED ON column.

1. Select the device name to mount and then click MOUNT. (Note that a pop-up menu is available with SELECT ALL and UNSELECT ALL options.)

2. Respond to the prompt, Do you need a permanent mount? Click OK for a permanent mount.

3. Click EXIT to exit the Disk Manager window.

To unmount a device:

Select the device name to unmount and then click UNMOUNT.

To mount a new device:

NOTE: Problems may arise if two devices are mounted to the same directory. To prevent this, ensure that no duplicate references to the same directory exist in the MOUNTED ON column.

1. Click MOUNT NEW. The MOUNT FILE SYSTEM window appears.

Figure 1.3-2 MOUNT FILE SYSTEM Window

2. In the FILE SYSTEM field, enter the pathname of the remote file system that you wish to mount on your local machine.

3. In the MOUNT POINT field, enter the pathname of the directory where you would like the remote file system mounted. You may choose from a list of directories on your machine by typing in the directory name or by clicking the knob to the left of the MOUNT POINT field and selecting the desired directory from the list presented in the CHOOSE MOUNT POINT window.

4. Click MOUNT to mount the file system to the designated mount point directory on your machine.

NOTE: The other buttons in the Disk Manager window are not currently functional. They will be activated and documented in a future release of the software.